ABSTRACT

Error correction coding and decoding according to a serial concatenated modulation system are carried out under high code rate. A coding apparatus 1 comprises three convolutional coders 10, 30 and 50 for carrying out convolutional operation; two interleavers 20 and 40 for rearranging order of data input; and a multi-value mapping circuit 60 for carrying out mapping of a single point on the basis of a predetermined modulation system. The coding apparatus 1 carries out convolutional operation whose code rate is "2/3" as coding of extrinsic codes by a convolutional coder 10, and carries out convolutional operation whose code rate is "1" as coding of inner codes by a convolutional coder 50, and a multi-value modulation mapping circuit 60 applies mapping to a transmission symbol of a 8 PSK modulation system to output it as a single code transmission symbol.